

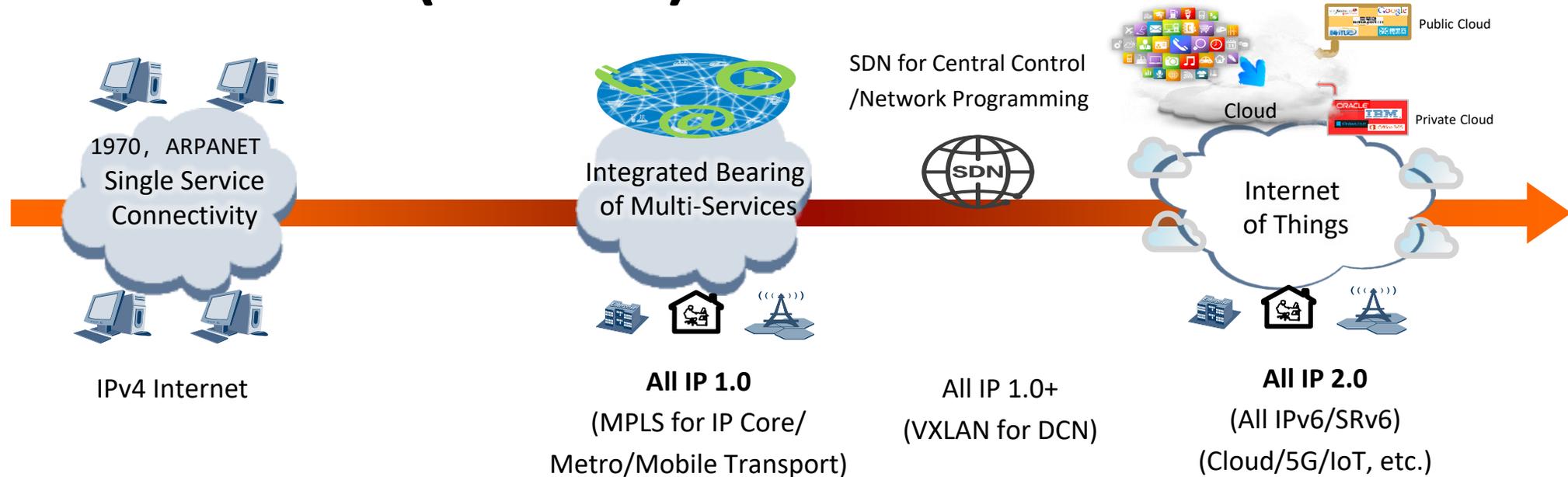
# Application-aware IPv6 Networking (APN6)

[draft-li-6man-app-aware-ipv6-network/](#)

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# SRv6 for All IP 2.0 (All IPv6)



- **Challenges of All IP 1.0 (MPLS)**

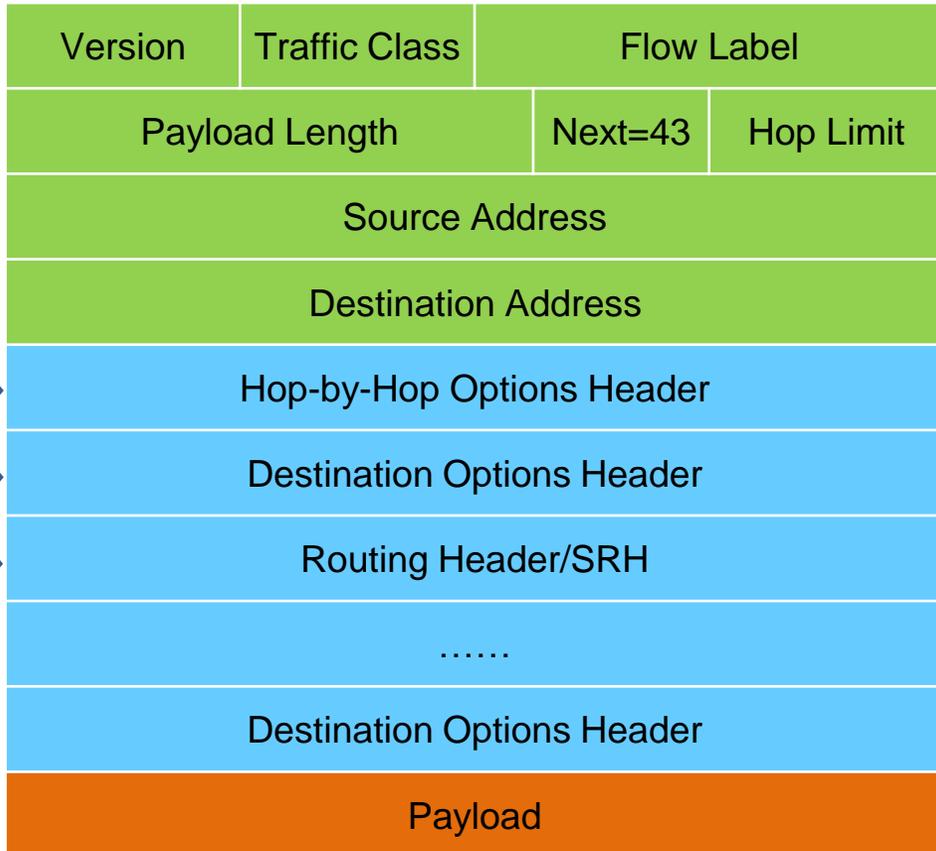
- Isolation of Network Domains owing to Islands of IP Transport Network.
- Limited space of encapsulation of IPv4 and MPLS for programmability for new services.
  - IPv4: IPv4 Options are not implemented.
  - MPLS: Fixed length and fixed fields.
- Networking on its own owing to decoupling application and network transport.
  - ATM to Desktop: Failed.
  - MPLS to Cloud: Failed.

- **Mission of SRv6**

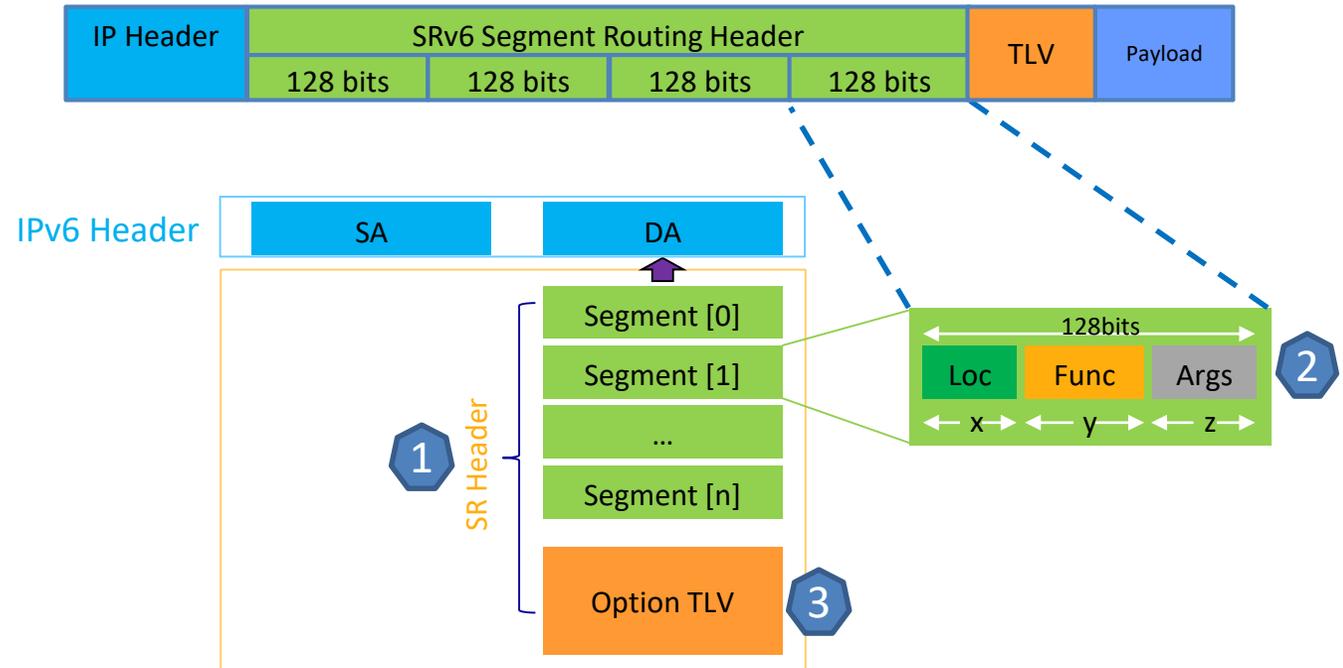
- Integrate different network easier based on affinity to IP reachability.
- More encapsulations/programmability for new services
- Cross the chasm between application and network. based on affinity to IP.
- Promote IPv6 combining with requirements on more address space.

# IPv6/SRv6 Benefits: Future-proof Programmability

## IPv6 Extension Headers

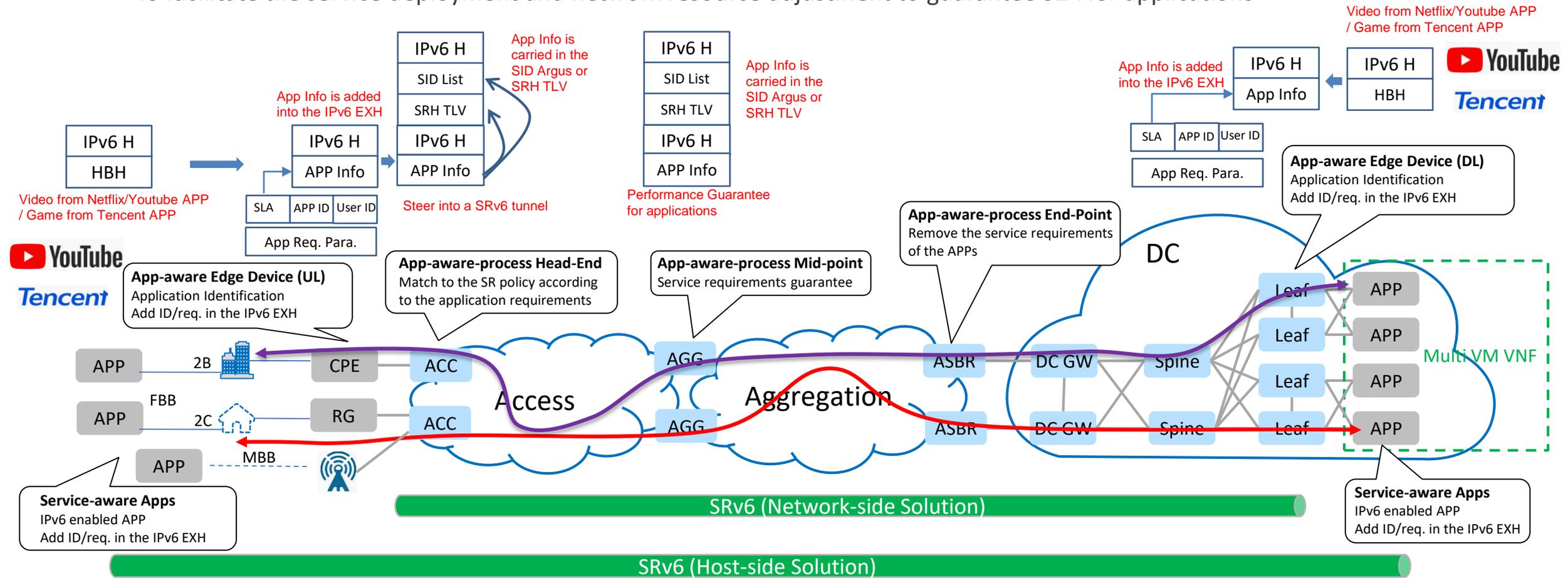


## SRv6 SRH: Three Levels of Programming Space



# Application-aware IPv6/SRv6 Networking (APN6)

- Make use of IPv6 extensions header to convey the service requirements along with the packet to the network
- To facilitate the service deployment and network resource adjustment to guarantee SLA for applications



# Welcome to Side meeting: APN6

Room: Notre Dame - Thursday

Occupancy: up to 50 attendees

Configuration: classroom

Location: [↪ Notre Dame](#)

	Meeting Name	Area	Contact	Meeting Description	More information
08:30	APN6	6man/spring	Zhenbin Li	APP-Aware IPv6/SRv6 Networking	

Tentative Agenda:

1. Co-chairs
2. Problem Statements and Requirements
3. Topics

Part I: App-aware Info Conveying

- Application-aware IPv6 Networking Framework
- FAST: Firewall and Service Tickets
- Enhanced Info for SFC

Part II: App-aware Services

- IFIT/IOAM
- Path Segment
- Detnet

4. Discussions

[↪ https://datatracker.ietf.org/doc/draft-li-cross-ietf-area-work/](https://datatracker.ietf.org/doc/draft-li-cross-ietf-area-work/)

[↪ https://datatracker.ietf.org/doc/draft-li-6man-app-aware-ipv6-network/](https://datatracker.ietf.org/doc/draft-li-6man-app-aware-ipv6-network/)

[↪ https://datatracker.ietf.org/doc/draft-li-6man-enhanced-extension-header/](https://datatracker.ietf.org/doc/draft-li-6man-enhanced-extension-header/)

[↪ https://datatracker.ietf.org/doc/draft-li-6man-ipv6-sfc-ifat/](https://datatracker.ietf.org/doc/draft-li-6man-ipv6-sfc-ifat/)

[↪ https://datatracker.ietf.org/doc/draft-li-6man-srv6-path-segment-encap/](https://datatracker.ietf.org/doc/draft-li-6man-srv6-path-segment-encap/)

[↪ https://datatracker.ietf.org/doc/draft-geng-spring-srv6-for-detnet/](https://datatracker.ietf.org/doc/draft-geng-spring-srv6-for-detnet/)

Thanks